



## IMPROVED WAN RELIABILITY. REDUCED BRANCH CAPEX COSTS.



### INDUSTRY

ARCHITECTURE, ENGINEERING,  
CONSTRUCTION

### HEADQUARTERS

MILPITAS, CA

### LOCATIONS

CALIFORNIA, NEVADA

### KEY STATISTICS

ENR TOP 100, 1B+ REVENUE IN 2014

### CHALLENGES

- Deliver demanding cloud-based modeling over the WAN to branch users
- Poor quality of service for critical collaboration applications for project managers and partners. Dissatisfied branch users
- IT team on the road 50% of the time for the lack of branch automation and centralized troubleshooting

### SOLUTION

- The VMware SD-WAN solution replaced an aging branch infrastructure with a cloud-delivered WAN that delivers virtualized services to remote sites with enterprise-grade performance, visibility and control

Leading construction company Devcon reduces branch CAPEX and OPEX costs while improving WAN reliability, performance for collaboration and modeling applications to remote branch users.

### Providing world-class construction services.

Devcon Construction, Inc. is consistently ranked among the top 100 construction companies worldwide. Since 1976, the company has built high-quality corporate campuses, data centers, education projects, green buildings, luxury hospitality venues, and sports and entertainment complexes. Because Devcon's headquarters are in Silicon Valley, many of its clients are well-known technology companies, such as Google, Yahoo, Adobe, Cisco, and Netflix. Devcon also built Levi's Stadium, home of the San Francisco 49ers football team, and Avaya Stadium, which house the San Jose Earthquakes soccer team.

Clients expect Devcon to use innovative modeling tools to help them visualize projects in the initial design and prototyping stages. Devcon uses a mix of Building Information Modeling (BIM) packaged software and online services from Autodesk, NavisWorks, and CAT3D. Devcon users also rely on Autodesk BIM360 Glue, a cloud-based BIM management and collaboration product that connects project teams and streamlines BIM project workflows from pre-construction through construction execution. In addition, the cloud-based application PlanGrid enables teams to access large blueprints and project plans on tablets in the field.

### Connections need to go the distance.

Besides headquarters, Devcon supports 50 construction offices in California and Nevada. Many of these are field offices associated with a specific project and lack access to high-bandwidth connectivity.

Devcon typically has to use whatever broadband connectivity is available from a local provider. Even when T1/MPLS connections are available, they are the most expensive option and require days or weeks for the provider to provision. Needless to say, a patchwork of WAN connections combined with high-bandwidth, cloud-based applications is a blueprint for user disappointment.

1. Unreliable connectivity led to poor voice quality for Devcon's Voice over IP (VoIP) solution and made video collaboration painful. Many project managers gave up using the VoIP solution because it negatively affected meetings and critical conversations.

**BENEFITS**

- Enabled reliable delivery of demanding mobile construction applications
- Reduced WAN CAPEX by 75% using ordinary broadband circuits
- Reduced OPEX by 50% by dramatically reducing onsite IT visits
- Increased IT efficiency with central monitoring capabilities
- Improved end-user productivity and satisfaction with collaboration applications

“We have all types of WAN connections. Ideally, we prefer T1/Multiprotocol Label Switching private lines, but we often rely on ordinary broadband connections like DSL and cable. We’ve even set up mobile 4G-LTE Internet connections to reach some locations.”

JOE TAN  
DIRECTOR OF IT, DEVCON CONSTRUCTION

“Devcon reduced its WAN bandwidth costs by 75% per month. Also, VeloCloud’s integrated Wi-Fi access point at the edge is great. With integrated Wi-Fi, we could deploy a wireless network that lets all remote users connect their mobile devices to the WAN. That feature alone allowed us to reduce our hardware footprint in each location.”

JOE TAN  
DIRECTOR OF IT, DEVCON CONSTRUCTION

2. Connectivity issues also slowed large file transfers, such as blueprints and project plans. In fact, a single large transfer could consume the majority of available bandwidth, significantly degrading performance for project management, vendor contract, billing, and other administrative applications.
3. And frustratingly, Devcon’s previous WAN solution provided very little visibility into network and application performance. Devcon has a lean IT team based at headquarters. Without the ability to monitor or correct issues centrally, team members were constantly on the road to fix issues at various sites and hindered planning.
4. Finally, the patchwork WAN environment complicated security. Devcon must allow third-party vendors and sub-contractors to access business-critical resources during a project, and the company needed highly granular control over access.

### Finding the right cloud.

Devcon evaluated solutions from multiple vendors to find the right combination of connectivity, performance, and security. After conducting a proof-of-concept trial, Devcon chose VMware™ SD-WAN by VeloCloud.® The VMware SD-WAN solution is the only complete, cloud-delivered WAN that delivers virtualized services to remote sites with enterprise-class performance, visibility, and control. At Devcon, VMware SD-WAN is delivered over existing connections using business policy-driven templates that include built-in Quality of Service (QoS) parameters and are pre-configured for the network edge. VeloCloud now connects everyone, over all of the company’s various connection links.

### Taking back productivity—and budget.

Since VMware SD-WAN equals or surpasses private T1/MPLS circuits, Devcon standardized on the solution. VMware SD-WAN’s Dynamic Multipath Optimization technology intelligently optimizes packet paths based on the application’s requirements, business priority, and connection cost. As a result, ordinary broadband circuits behave as enterprise-grade WAN connections.

The Devcon IT team also saves significant time in deploying and managing remote sites. With VMware SD-WAN, IT pre-configures edge devices before they are shipped to the remote site. Once the device is connected, the IT team can watch it come online through the VMware SD-WAN Orchestrator. Configuring, tuning, and management are handled from headquarters and IT team members spend a lot more time at home.

“Central monitoring and troubleshooting is much easier,” said Tan. “We have granular, real-time visibility into WAN traffic. This lets us track bandwidth utilization for VoIP traffic and fine-tune voice quality from headquarters. It’s easier for us, and our users have a much better experience.”

IT monitors each remote location with VMware SD-WAN Orchestrator. Team members can instantly troubleshoot if any connectivity or performance degradation occurs and quickly remediate an issue. They can monitor bandwidth consumption, identify rogue devices or users, and regulate bandwidth allowances.

“We have cut our operational costs by 50% by avoiding trips to remote locations for IT reasons. And we gained productivity and efficiency”

JOE TAN  
DIRECTOR OF IT, DEVCON CONSTRUCTION

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### Improved collaboration and mobility.

Devcon now can provide high-performance voice and collaboration applications to all locations while enabling mobile users to easily access the WAN. And it achieved its goals while preserving its existing network design and equipment. Soon, any team member anywhere will be able easily access BIM and other applications to accelerate processes and projects.